# An Adaptive Data Center for Dynamic IT

Aligned Energy's Phoenix Data Center

2500 W Union Hills Drive Phoenix, AZ 85027 800.232.2817

**Aligned**Energy

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## An adaptive data center

Business needs and IT loads are moving targets. At Aligned Energy's colocation data centers, you can adapt on demand, keeping capacity, performance, and reliability in sync no matter how quickly your requirements change. Whether you're a service provider or enterprise, with Aligned Energy you'll have an experienced partner on your side.

# **Adaptive**

We can deliver a scalable data center solution sized to your requirements today, and provision capacity on demand as your needs evolve. We'll grow along with you both vertically (in terms of power density) and horizontally (in terms of square feet).

# **Client portal**

Our client portal offers true transparency, with a singular entry point that spans capacity planning, asset optimization, help desk ticketing, and business intelligence. Instead of multiple access points, you have one centralized portal, enabling broader visibility and a more insightful approach to asset management.



# Dynamic infrastructure

Our patented cooling technology not only lowers costs, but is also ultra-efficient and sustainable. It supports standard and high power densities (up to 50kW per rack) and offers a 1.15 PUE. Efficient and reliable in any climate, at any load, our cooling technology can grow and scale with you incrementally as needed.



# **Engineered for resiliency**

### Resilient

**400** year

100% Uptime SLA & carrier-neutral connectivity to ensure your IT operations are always online.

Independently validated - via Fault Tree Analysis - with a reliability class of 0.25% (400 year MTBF).

"One of the most reliable cooling & power generation platforms ever studied."

Steve Fairfax President, MTechnology

### **Rack density**

50kW

Variable standard and high density power (up to 50 kW per rack) without additional infrastructure to support high performance computing demands.

### **Critical capacity**

**120MW** 

We built the Phoenix colocation data center to support 120 MW of critical capacity at full build.

### Security

**365** 

Our data centers protect your colocation environment behind multiple layers of physical access controls, including perimeter fences with intrusion laser detection, 24x7x365 on-site security, mantraps, dual authentication including biometrics and RFID tracking, event-driven IP video surveillance, visual light-based alerts, and more. We also provide round-the-clock engineering assistance and global monitoring via our Network Operations Center (NOC).

### **Guarantee**

**1.15 PUE** 

We contractually guarantee a 1.15 PUE, regardless of client load or utilization.

### Design & facility

Tier III

We built the Phoenix data center to Tier III facility and design standards to ensure our data center is consistent with your uptime objectives.



### **Services**

### Colocation

### **Colocation footprints**

Fully enclosed colocation footprints trap and absorb hot air at its source. Footprints easily scale to thousands of racks, allowing you to expand your IT load horizontally and vertically, on demand.

- Variable and contiguous rack densities (up to 50 kW)
- Whip installations or overhead power busways – expandable on demand
- eSYNC absorption units remove heat at its source
- Cross connect services or direct carrier interconnection available
- Lockable walls for privacy and air containment supplied by you or Aligned Energy
- Standard Client Portal offers asset monitoring, help desk ticketing, business intelligence, and capacity forecasting from a single- entry point
- Implementation Liaison helps facilitate a smooth migration

#### **Remote hands support**

Get expert assistance with colocation equipment racking, reboots, disk changes, triage, cross connections, and more. Our engineers are available on-site whenever you need them.

### Connectivity

### **On-net data center carriers**

For simple and fast turn-up, choose from a variety of on-net network providers or connect to nearby carrier hotels via Aligned Energy pathways.

### Flexible entrance options

- Clients can bypass the Aligned Energy MDF, if needed
- Aligned Energy offers direct carrier interconnection, including dedicated carrier facilities to client suites

### **Additional**

#### **Custom Client Portal**

Opt for a fully customized Client Portal to further tailor the tool or extend monitoring beyond your Aligned Energy environment.

### Dedicated office & storage space

Strengthen your operational performance and ensure efficiency with dedicated office and storage space. Your space is on-net and connected to our UPS system for consistent and reliable functionality.

### **Build to scale solutions**

If a multi-tenant solution doesn't fit your needs, we'll deliver standard or custom data center builds in new markets to your specifications.



# **Colocation footprints**

#### **Features**

**Colocation** sold by the footprint - a fully contained enclosure that is tailored to client requirements and loads.

**Hot aisle containment** traps and contains heat at its source. Use our containment or your own.

**Perimeter cooling** features close-coupled flexible designs, micro-channel coils and highly efficient fans.

### Whips or overhead power busways

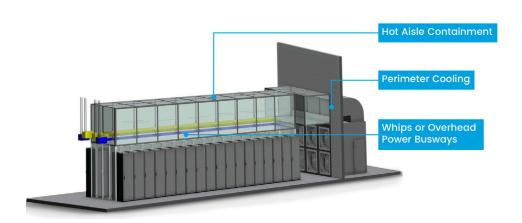
A/B-configured, flexible and expandable.

### Variable & high density power

Up to 50 kW/rack, in the same row, without additional infrastructure.

### **Slab foors**

Our technology eliminates the need for raised floors.



### **Dynamic results**

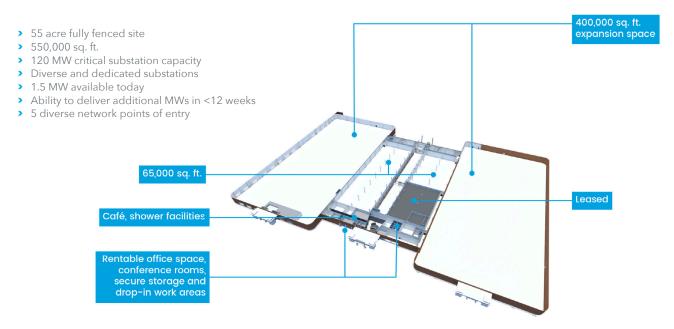
- > Scalable. We can provision 1.5 MW today with multiple MW of capacity delivered in less than 12 weeks
- > **Future-proof.** Our technologies are here for you today and tomorrow, with power densities up to 50 kW per rack and guaranteed 1.15 PUE
- > Reliable. We offer a 100% Uptime SLA in a Tier III certified center
- Sustainable. Our efficient platform saves up to 85% water and up to 80% energy
- Easy to work with. We strive to be flexible and easy to do business with - all while offering outstanding customer support

### Phoenix, AZ Data Center

### **Colocation site specifications**

2500 W Union Hills Drive Phoenix, AZ 85027 800.232.2817





With the lowest threats from natural disasters nationwide\* Phoenix is a top 10 U.S. multi-tenant data center market. The Arizona Commerce Authority incentivizes companies that collocate in Phoenix with a 20-year sales tax exemption that can mean millions of dollars in savings. This ~550,000 square foot building (full build) is situated on more than 55 acres, providing ample room to expand.

### General

Renovated	2016
Campus	55 Acres
Total Building SF	Full build: 550,000 sq. ft.
Total Data Hall SF	Full build: ~300,000 sq. ft.
Building Construction	Concrete slab-on-grade and structured steel
Structure	Three interconnected multi-tenant buildings
	ASCE7 occupancy category IV. Data Hall FM-120 and Office FM-90 roof lift ratings
	Wind importance factor of 1.15
Loading Dock	Three bays with delivery platform and equipment trap
Office Space	Dedicated office space for rent: on-net and UPS-backed
	Shared: conference rooms and drop-in office pods
Storage	Space available for rent
Access	24/7/365
PUE	Guaranteed 1.15
Design	Built to Tier III facility and design standards
Reliability SLA	100% Uptime SLA

### **Telecom**

Points of Entry	Five diverse conduit entrances
Carrier Neutral	Multiple carriers
Carriers	CenturyLink, Level(3), Cox, SRP, Zayo, Cyberverse
Meet-me-rooms	Three diverse MMRs

#### **Power**

Utility Power	Diverse and dedicated substations: 62MW Phase 1 expandable to 120MW
UPS	2.25 MW concurrently maintainable UPS blocks
Generators	N+4 power generation using N+1 "4-engine" blocks
Distribution	Redundant A+B distribution
Power Metering	Revenue-grade, transparent/ real-time metered at the PDU and rack level



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### Security & compliance

Facility Perimeter	Steel security fencing
Entrance	Five layer security design; Motorized gates
Access Gates	Card reader access
On-site Security	24x7x365 with security guards
Facility-wide Features	Multiple check-points, dual authentication, mantraps, and biometric scanners
	Event driven IP video surveillance and visual light-based alerts
Compliance	Service Organization Controls (SOC) 2,Type 1
	PCIDSS
	HIPAA and HITECH
	NIST 800-53 for Colocation Services

### Cooling

System	Our hot aisle containment strategy absorbs heat at its source - supporting standard and high power densities and allowing you to scale vertically and horizontally without stranding capacity.
Reliability	Configurable to client needs (i.e. N, N+1, 2N)

### **Sustainability**

Water	Uses up to 85% less water
Power	Uses up to 80% less power

### **Fire protection**

Zones	Separately zoned data halls
Smoke Detection	VESDA (Very Early Smoke Detection Apparatus)
Sprinkler System	Dual interlock pre-action (data halls - MMR - critical equipment)

### Arizona data center sales tax exemption

Because Aligned Energy's Phoenix facility is a "sustainable redevelopment project" our colocation tenants receive a 20 year sales tax exemption on IT equipment so long as they contract for 500 kW (or more) per month for 2+ years.

### **About Aligned Energy**

Aligned Energy is an infrastructure technology company that offers colocation and build-to-scale data center solutions to cloud, enterprise, and service providers. Our intelligent infrastructure allows us to deliver data centers like a utility-accessible and consumable as needed. By reducing the energy, water, and space needed to operate, our technology innovations offer businesses a competitive advantage by improving reliability and their bottom-line, while helping secure the health of the planet.

Contact us for more information or to schedule a data center tour.

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